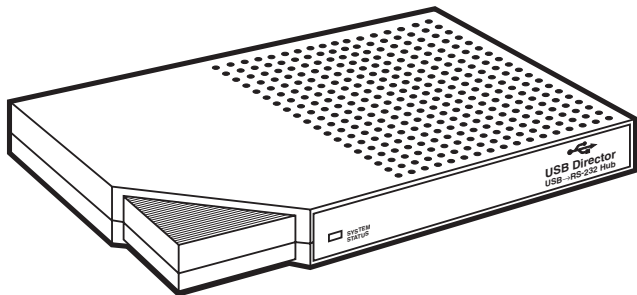


# USB Director/USB— RS-232 Hub



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## CUSTOMER SUPPORT INFORMATION

Order **toll-free** in the U.S. 24 hours, 7 A.M. Monday to midnight Friday: **877-877-BBOX**  
FREE technical support, 24 hours a day, 7 days a week: Call **724-746-5500** or fax **724-746-0746**  
Mail order: **Black Box Corporation**, 1000 Park Drive, Lawrence, PA 15055-1018  
Web site: [www.blackbox.com](http://www.blackbox.com) • E-mail: [info@blackbox.com](mailto:info@blackbox.com)

**FEDERAL COMMUNICATIONS COMMISSION  
AND  
CANADIAN DEPARTMENT OF COMMUNICATIONS  
RADIO FREQUENCY INTERFERENCE STATEMENTS**

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio communication. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be necessary to correct the interference.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

*This digital apparatus does not exceed the Class A limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of the Canadian Department of Communications.*

*Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de classe A prescrites dans le Règlement sur le brouillage radioélectrique publié par le ministère des Communications du Canada.*

## **NORMAS OFICIALES MEXICANAS (NOM)**

### **ELECTRICAL SAFETY STATEMENT**

### **INSTRUCCIONES DE SEGURIDAD**

1. Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.
2. Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.
3. Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.
4. Todas las instrucciones de operación y uso deben ser seguidas.
5. El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc..
6. El aparato eléctrico debe ser usado únicamente con carritos o pedestales que sean recomendados por el fabricante.
7. El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.
8. Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá a lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.
9. El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquea la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.

10. El equipo eléctrico debe ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.
11. El aparato eléctrico deberá ser conectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.
12. Precaución debe ser tomada de tal manera que la tierra física y la polarización del equipo no sea eliminada.
13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.
14. El equipo eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.
15. En caso de existir, una antena externa deberá ser localizada lejos de las líneas de energía.
16. El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.
17. Cuidado debe ser tomado de tal manera que objetos líquidos no sean derramados sobre la cubierta u orificios de ventilación.
18. Servicio por personal calificado deberá ser provisto cuando:
  - A: El cable de poder o el contacto ha sido dañado; u
  - B: Objetos han caído o líquido ha sido derramado dentro del aparato; o
  - C: El aparato ha sido expuesto a la lluvia; o
  - D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o
  - E: El aparato ha sido tirado o su cubierta ha sido dañada.

## **TRADEMARKS**

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# 1. Specifications

**System Requirements**—Pentium® class CPU, 16 MB RAM, (1) available USB type A (downstream) port, current version of Windows® 95 (OSR2) shipping with PCs and servers supporting a USB bus

**Speed**—110 to 230 kbps

**Interface**—EIA RS-232

**Connectors**—(4) DB9 male, (1) USB type B port

**Temperature**—32 to 104°F (0 to 40°C)

**Humidity**—Up to 95% noncondensing

**Power**—USB bus-powered, consumes less than 200 mA at full operating speed

**Size**—1.5"H x 9"W x 5"D (3.8 x 22.9 x 12.7 cm)

**Weight**—1 lb. (0.5 kg)

## 2. Introduction

### 2.1 General

The USB Director/USB—RS-232 Hub is an intelligent, stackable expansion module that connects to a PC or server via the Universal Serial Bus (USB) port and provides four high-speed RS-232 serial ports. It features easy connectivity for modems, printers, point-of-sale and industrial control devices that use a standard serial interface.

### 2.2 What the Package Includes

Your package should include the following items. If anything is missing or damaged, please contact Black Box immediately at 724-746-5500.

- USB Director/USB—RS-232 Hub
- 3-ft. (0.9-m) USB cable
- (4) software diskettes:
  - (1) Windows 95 drivers diskette
  - (1) Windows 98 drivers diskette
  - (1) Windows 2000 drivers diskette

- (1) Windows NT 4.0 drivers diskette
- (1) set of stack legs
- This user manual

### 2.3 Features

The Director offers the following features:

- Lets you add four high-speed serial ports to your PC or server in seconds.
- You can attach additional Director modules as needed by snapping in a powered USB Hub.
- Eliminates the difficult configuration issues associated with high-priced, older card solutions (no PC slots are required).
- Since the Director installs outside of your PC case, unlike an interface card, it enables you to avoid the hassle of removing your PC cover.
- The Director's hot-swappable, so you don't have to reboot the operating system during installation.

## 3. Installing the Software

If you are certain that your system supports USB, proceed to **Section 3.4**. If you are not sure, read **Sections 3.1 through 3.3**.

### 3.1 Verifying that your System Supports USB

#### *Determining USB Status*

To determine if your system supports USB, follow these steps:

1. Insert the disk labeled “Direct Driver Diskette.”
2. In the “START” menu, select “RUN.”
3. Type “a:\usbready.” One of two USB System Checker dialog boxes will appear.
  - 3a. If your system does not support USB, the dialog box will read:

“This system DOES NOT currently support USB!”
  - 3b. If your system does support USB, the dialog box will read:

“This system DOES have support for USB.”

To display your Windows version and USB host controller, follow these steps:

1. Click on the “DETAILS” button.
2. If the “Test Results Details” dialog box shows Windows 95 version 4.0.1111, which is Windows 95 OSR2, proceed to **Section 3.3**. You will need to upgrade your Windows to OSR 2.1 by installing the USB supplement before installing the drivers.
3. If you have Windows 95 version 4.0.1212 or higher, which is OSR 2.1, then proceed to **Chapter 4**.

### **3.2 Determining Why Support Is Not Present**

The “DETAILS” button can help you determine which one of two scenarios are preventing USB support.

1. Click on the “DETAILS” button. One of two “Test Results Details” dialog boxes will appear.
  - 1a. If the USB Class Host Controller window displays any other message, such as “Standard,” “Intel,”

“Universal,” or “Open” Host Controller, then hardware support is present, but an incompatible version of Windows is currently installed.

- 1b. If the Test Results dialog box shows Windows 95 version 4.0.1111, which is Windows 95 OSR.2, proceed to **Section 3.3**. You will need to upgrade your Windows 95 version to OSR 2.1 by installing the USB supplement before installing the Director.

### NOTE

Windows 95 version 4.0 does not support the upgrade path to USB. Unfortunately, Microsoft® has not provided an upgrade path to OSR2 from earlier versions of Windows. OSR2 must be preinstalled by your PC vendor. Call Black Box Technical Support at 724-746-5500 for more information.

## 3.3 Installing Microsoft USB Support

Microsoft provides a supplemental program (**usbsupp.exe**) to allow users to upgrade Windows 95 version OSR2 to support the Universal Serial Bus. Follow these steps to install this support:

1. Insert the disk labeled “Direct Driver Diskette.”
2. In the “START” menu, select “RUN.”

3. Type **a:\usb supp.**
4. Follow the instructions on the screen. After rebooting, go back to Step 1 in **Section 3.1**. Make sure that the Test Results Details (from the “Details” button in the “USB System Checker” dialog box) displays Windows 95 version 4.1212 or higher.

### **3.4 Installing the Drivers**

To install the drivers, follow these steps:

1. Windows will detect the device when connected, then prompt you if you want to search for the driver.
2. Click on “NEXT” to initiate a search for the updated driver device.
3. Click on “FINISH” to continue with the installation.
4. You will be asked to insert the “Driver Disk.”
5. Insert the “Installation Disk” into drive A.
6. Click on “OK.” The “Copying Files...” dialog box will appear.
7. Type “A:” in the “copy file from” field and click “OK.”

## 4. Installing the Director

Follow these steps to install the Director:

1. Plug the flat rectangular end of the USB cable into the downstream “A” connector located in the back of your computer or USB hub port.
2. Plug the square end of the cable into the Director.
3. If the following dialog box does not appear, go to **Section 3.2** to verify that your system supports USB.



Figure 4-1. Update Device Driver Wizard screen.

The “Update Device Driver Wizard” dialog box will appear a second time in order to install support for Windows 95 communication ports. See **Figure 4-2**.



**Figure 4-2.** Update Device Driver Wizard screen.

4. Follow the instructions on the screen. Wait as ports are assigned. Installation is complete when the dialog box disappears.

Your four new communication ports, numbered sequentially following the existing ports in your system, are now ready.



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